New Mexico Bureau of Land Management
Interim Guidelines for Collecting and Reporting Global Positioning System (GPS) Cultural and Paleontological Site Location Information

These guidelines have been developed to provide Cultural Resource Professionals and Paleontologists working on BLM cultural resource inventories and paleontological surveys a standard for data collection and reporting cultural and paleontological site locations using GPS equipment. These standards may also be applied where site boundary and inventory location information are provided using GPS equipment.

Minimum Standard for Site Location Data Collection

A single location will be recorded in the approximate center of the site (centroid). Linear resources (trails, canals, trackways etc.) will require multiple locations recorded. The GPS data collection point will be plotted on site plan maps, and will conform to the marked site stake where feasible. The coordinate system utilized will be Universal Transverse Mercator (UTM), Datum - North American Datum of 1927 (NAD27). These parameters are desired to conform to existing requirements of the NMCRIS system in New Mexico, and most available paper editions of USGS 7.5' quadrangles.

Offset data collection procedure

Describe procedure for mapping site location from offset GPS recording location where steep terrain or other obstacles prevent direct GPS recording. For example, "Site location mapped with tape at 40 meters,125 degrees (true) from offset GPS recording location".

Minimum Standard for GPS Data Reporting

The following information will be presented in addition to the site location UTM coordinates with the site form documentation required by the state in which the site is located.

State Site Number/Field Number
GPS Receiver Make/Model
Coordinate System (UTM)
UTM Zone
Datum (NAD27)
Length of Observation (minutes)
Number of observations (where available)
Horizontal Error estimates (where available)
Position Dilution of Precision (where available)
Post Processing Method (where applicable)
Offset data collection procedure (where applicable)

Report this data on a separate continuation sheet to the site form for each site.

Map Graphics for Cultural Resource Inventory Reports and Site Forms

Paper copies of site location maps supplied with inventory reports and site forms based on USGS 7.5 minute (1:24000) quadrangles and other source graphics may need to reconcile errors resulting from accuracy limitations in the USGS source graphic. GPS site

locations may plot incorrectly in relation to quadrangle features (roads, powerlines, section lines, etc.,) and should be adjusted accordingly to render map representations useful.

Preferred Standard for Site Location Data Collection and Processing (ESRI/ArcView users)

Site location boundaries will be collected as routes/tracklogs in Universal Transverse Mercator (UTM) coordinate system, North American Datum of 1983 (NAD83), and converted to polygons, attributed with the LA site number. Linear features will be recorded as line features, and later buffered to the average width of the linear resource documented, resulting in a polygon feature, attributed with the LA site number.

Preferred Standard for Site Location Data Submission and Reporting (ESRI/ArcView users)

Site locations converted to polygons should be re-projected to UTM NAD27 projection and exported in ESRI shapefile format on Windows formatted digital media, with GPS Data Reporting information in a separate ASCII text file. Each shapefile will include a defined projection file (.prj).

Preferred Standard for Cultural Resource Inventory Location Data Collection and Processing (ESRI/ArcView users)

Inventory boundary locations collected as routes/tracklogs in Universal Transverse Mercator (UTM) coordinate system, North American Datum of 1983 (NAD83) and converted to polygons, attributed with the NMCRIS report number. Linear inventory boundaries may be collected as line features, and later buffered to the total width of the inventory, resulting in a polygon feature, attributed with the NMCRIS report number.

Preferred Standard for Cultural Resource Inventory Location Data Submission and Reporting - (ESRI/ArcView users)

Inventory areas converted to polygons should be re-projected to UTM NAD27 projection and exported in ESRI shapefile format on Windows formatted digital media, with GPS Data Reporting information in a separate ASCII text file. Each shapefile will include a defined projection file (.prj). Multiple inventory areas should be unioned to a single shapefile for each report.